

REMARKS

This application has been carefully reviewed in light of the final Office Action dated November 2, 2009. Claims 1 to 7, 19 and 20 are pending in the application, of which claims 1, 19 and 20 are in independent form. Reconsideration and further examination are respectfully requested.

As a formal matter, Applicant has requested a 3 months suspension of action in the Request for Continued Examination that is being filed concurrently herewith. The purpose of the suspension is to provide an opportunity to schedule and conduct an interview.

Claims 1 to 7, 19 and 20 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,047,955 (Shope) in view of U.S. Patent No. 6,671,066 (Aikawa) and further in view of U.S. Patent No. 7,254,668 (Chang). Reconsideration and withdrawal of the rejections are respectfully requested.

The claims herein generally concern transmitting a document from a data processing apparatus to a printing device, wherein the document is formed by a plurality of logical pages, and printing pages for each of a plurality of sets. In particular, a plurality of logical pages for each of a plurality of sets is spooled. A number of spooled logical pages is derived. The derived number of logical pages is fewer than an entirety of the spooled logical pages, and the derived number of logical pages corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages. One logical page, identical in drawing information to a first logical page, is retrieved from among the derived number logical pages. Drawing information from the first logical page to a logical page just previous to the one retrieved logical page is determined to be drawing

information for one of the plurality of sets. A print command to be transmitted to a printing device based on the drawing information for the one determined set is generated and transmitted to the printing device.

Thus, the drawing information of the first logical page is compared with a derived number of logical pages that is fewer than an entirety of the spooled logical pages.

It is therefore one feature of the claims herein that the derived number of logical pages corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages.

For example, if the number of logical pages in the document is 12, the numerical factors of the number 12 are 1, 2, 3, 4, 6 and 12.¹ The values obtained by adding 1 (one) to the numerical factors are 2, 3, 4, 5 and 7 (13 is not applicable). Therefore, the derived number of logical pages to be compared with the first logical page might be only five logical pages (corresponding to the five numbered pages 2, 3, 4, 5, and 7), which is fewer in number than the entirety of all 12 spooled logical pages.

In particular, if logical pages 1 to 4 are spooled for each of three sets, i.e., pages 1, 2, 3 and 4 for the first set, pages 1, 2, 3 and 4 for the second set, and pages 1, 2, 3 and 4 for the third set (12 pages in total), then the values obtained by adding 1 (one) to the numerical factors are 2 (page 2 for the first set), 3 (page 3 for the first set), 4 (page 3 for the

¹The Amendment dated July 22, 2009 included a numerical example at page 8 related to the derivation of a number of logical pages. Applicant submits that the July 22nd numerical example differs from that herein at least partly because of differences in claim language. Accordingly, Applicant expressly repudiates the July 22nd numerical example. The public at large and the USPTO should therefore not rely on arguments related to the July 22nd numerical example in any way, and in particular should not rely on such arguments in a determination of patentability or scope of claims.

first set), 5 (page 1 for the second set), 7 (page 3 for the second set). Thus, pages 2 to 4 for the first set and pages 1 and 3 for the second set are derived. The one logical page identical in drawing information to the first logical page is retrieved from among the five derived logical pages. Since only five logical pages are compared to the first logical page, the one logical page (i.e., page 1 for the second set) can be more efficiently retrieved.

One example embodiment is described in the specification with respect to Figure 6. According to the flowchart of Figure 6, iPage is always equal to 1 while deriving the number of logical pages. Thus, Figure 6 describes a situation in which the derived number of logical pages corresponds to values obtained by adding 1 (one) to numerical factors of a total number of the spooled logical pages.

Naturally, the claims are not limited by specifics of the embodiments described herein, which are merely examples of arrangements that fall within the scope of the claims.

Thus, the claimed arrangement may retrieve the one logical page more efficiently, since the number of logical pages to be compared is reduced.

Because the one retrieved logical page is used to as a delimiter between sets, by virtue of the foregoing arrangement, the delimiter between sets may be determined more efficiently.

Applicant submits that the applied references, alone or in any permissible combination, are not seen to disclose or to suggest the foregoing arrangement, particularly the notion of deriving a number of logical pages that corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages.

More particularly, the applied references, alone or in any permissible combination, are not seen to disclose or to suggest at least the features of deriving a number of spooled logical pages, wherein the derived number of logical pages is fewer than an entirety of the spooled logical pages, and wherein the derived number of logical pages corresponds to values obtained by adding 1 (one) to numerical factors of a total number of the spooled logical pages, and retrieving, from among the derived number of logical pages one logical page identical in drawing information to a first logical page, wherein drawing information from the first logical page to a logical page just previous to the retrieved one logical page is determined to be drawing information for one of the plurality of sets.

Shope is seen to disclose storing rasterized signals of multi-page documents so that a plurality of electronically collated, multi-page sets can be printed without re-rasterization. Shope is seen to disclose an electronic collation means for presenting the stored image data for printing in the proper sequence, as often as is needed to produce the desired number of collated document sets, whereby a plurality of electronically collated, multi-page sets can be printed without re-rasterization. See Shope, column 3, lines 9 to 14.

However, Shope is believed to be silent on deriving a number of logical pages that corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages.

Aikawa is seen to disclose processing print data, in which one job consists of multiple sets of prints data with no break. Aikawa discloses the following:

“The comparison process of the data at the step S1241, when the print data of the first page stored in the memory is identical to that of the received page, consists of determining a certain page of the print

data that is identical to the first page is indeed the first page of the next set among a continuing multiple sets of print data”. See column 13, line 63, to column 14, line 1, of Aikawa.

Thus, Aikawa is seen to teach a comparison between the first page of print data to a certain page of the print data.

However, Aikawa is believed to be silent on deriving a number of logical pages that corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages.

Chang is seen to disclose enabling pages within a block of memory to be accessed. Chang discloses that “the number of pages 604 within a group 608 may be a multiple of four, e.g., there may be four or eight pages 604 per group 608”. See column 10, lines 45 to 47, of Chang. Thus, Chang might be seen by some to disclose deriving a number of pages using a multiple of four (e.g., four or eight pages).

Chang is also seen to disclose the following:

“ . . . the number of groups 810, 814 is typically a power of two. For example, there may be one, two, four, or eight groups 810 in logical block 802”. See column 11, lines 61 to 63 of Chang.

Thus, Chang might be seen by some to disclose that the number of groups in a logical block are typically a power of two (e.g., one, two, four or eight groups in a logical block).

On the other hand, the claims herein define deriving a number of logical pages that corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages, and retrieving, from among the derived number of logical pages, one logical page identical in drawing information to a first logical page, so as to identify a delimiter between sets of logical pages.

For example, as explained above, if logical pages 1 to 4 are spooled for each of three sets (i.e., 12 pages in total), then the values obtained by adding 1 (one) to the numerical factors are 2 (page 2 for the first set) , 3 (page 3 for the first set), 4 (page 3 for the first set), 5 (page 1 for the second set) and 7 (page 3 for the second set). Thus, pages 2 to 4 for the first set and pages 1 and 3 for the second set are derived. Since the logical page identical in drawing information to the first logical page (i.e., page 1 for the second set) is included in the derived number of logical pages, this one logical page can be retrieved and used to identify drawing information for one of the sets.

In contrast, Chang might be seen by some to disclose deriving a number of pages using a multiple of four (e.g., four or eight pages), or including a number of groups in a logical block that is a power of two (e.g., one, two, four or eight groups in a logical block).

However, Chang is believed to be silent on deriving a number of logical pages that corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages.

Therefore, it is Applicant's understanding that if logical pages 1 to 4 are spooled for each of three sets, i.e., pages 1, 2, 3 and 4 for the first set, pages 1, 2, 3 and 4 for the second set, and pages 1, 2, 3 and 4 for the third set (12 pages in total), then the combination of Shope, Aikawa and Chang might be seen by some to suggest that the logical pages to be compared with the first logical page might be only 3 logical pages (i.e., pages corresponding to page 4 for the first set, page 4 for the second set and page 4 for the third set). Alternatively, the combination of Shope, Aikawa and Chang might be seen by some to suggest that the logical pages to be compared with the first logical page might be

only 6 logical pages (i.e., pages corresponding to pages 2 and 4 for the first set, pages 2 and 4 for the second set and pages 2 and 4 for the third set). In both of these cases, none of the derived pages are identical in drawing information to the first logical page (i.e., identical to page 1 for the first set), since no page 1 from any set is included in the derived pages.

Thus, the combination of Shope, Aikawa and Chang is believed to be silent on retrieving one logical page identical in drawing information to a first logical page, so as to identify a delimiter between sets of logical pages.

Therefore, the applied references, alone or in any permissible combination, are not seen to disclose or to suggest the foregoing arrangement, particularly the notion of deriving a number of logical pages that corresponds to values obtained by adding 1 (one) to numerical factors of a total number of spooled logical pages.

More particularly, the applied references, alone or in any permissible combination, are not seen to disclose or to suggest at least the features of deriving a number of spooled logical pages, wherein the derived number of logical pages is fewer than an entirety of the spooled logical pages, and wherein the derived number of logical pages corresponds to values obtained by adding 1 (one) to numerical factors of a total number of the spooled logical pages, and retrieving, from among the derived number of logical pages one logical page identical in drawing information to a first logical page, wherein drawing information from the first logical page to a logical page just previous to the retrieved one logical page is determined to be drawing information for one of the plurality of sets.

In view of the foregoing amendments and remarks, independent Claims 1, 19 and 20, as well as the claims dependent therefrom, are believed to recite subject matter

that would not have been obvious from the applied art, and are therefore believed to be in condition for allowance.

REQUEST FOR INTERVIEW

Applicant respectfully requests an interview to discuss the differences between the present invention and the applied art. For his part, the undersigned will also telephone the Examiner in the following weeks in an effort to determine the status of the application, and also to schedule an interview. Accordingly, however, if the Examiner reaches this case for action before an interview has been scheduled, Applicant respectfully requests that the Examiner contact the undersigned at (714) 540-8700 for scheduling of an interview.

CONCLUSION

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

No claim fees are believed due. However, should it be determined that additional claim fees are required under 37 C.F.R. 1.16 or 1.17, the Director is hereby authorized to charge such fees to Deposit Account 06-1205.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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FCBS_WS 4665072v1